APPROVED BY TRANSPORTATION COMMISSION ON DECEMBER 19, 2019

APPROVED
SUMMARIZED MINUTES

CITY OF SCOTTSDALE
TRANSPORTATION COMMISSION
REGULAR MEETING

Thursday, November 21, 2019

KIVA – CITY HALL
3939 N. DRINKWATER BOULEVARD
SCOTTSDALE, AZ 85251

1. CALL TO ORDER

Chair called the regular meeting of the Scottsdale Transportation Commission to order at 5:15 p.m.

2. ROLL CALL

PRESENT: Barry Graham, Chair
Pamela Iacovo, Vice Chair
Don Anderson
George Ertel
Michael Kuzel
B. Kent Lall
Mary Ann Miller

STAFF: Dave Meinhart, Senior Transportation Planner
Phillip Kercher, Traffic Engineering and Operations Manager
Hong Huo, Principal Traffic Engineer
Frances Cookson, Staff Representative

3. PUBLIC COMMENT

There were no public comments.

4. APPROVAL OF MINUTES

Regular Meeting of the Transportation Commission – October 17, 2019

Chair invited comments on the minutes. Commissioner provided one grammatical correction.

COMMISSIONER ERTEL MOVED TO APPROVE THE REGULAR MEETING MINUTES OF THE TRANSPORTATION COMMISSION ON OCTOBER 17, 2019 AS AMENDED. COMMISSIONER ANDERSON SECONDED THE MOTION, WHICH CARRIED 7-0 WITH CHAIR GRAHAM, VICE CHAIR IACOVO AND COMMISSIONERS ANDERSON, ERTEL, KUZEL, LALL AND MILLER VOTING IN THE AFFIRMATIVE WITH NO DISSENTING VOTES.

5. SIGNAL UPDATE

Hong Huo, Principal Traffic Engineer, stated that the signal retiming effort started in 2016. The Federal Highway Administration (FHWA) recommends that traffic signal timing should be reviewed every three to five years and more often if there are significant changes in traffic volumes or roadway conditions. In 2016, such efforts were mainly focused on corridor-based coordination. Eleven corridors were retimed and coordinated during that effort. This year's signal retiming study is focused on network-based optimization. This involves evaluating the whole area as a network.

The signal retiming process begins with identifying the subject retiming zone or area. They then commence with entering existing counts and data into the software model. This is followed by validation and analysis. New signal timing is then implemented in the field. This involves programming and testing controllers, observing traffic operation and fine-tune the timing. The next step involves evaluation of the new signal timing. Real time performance measures are evaluated a using new automated system. The final step is to maintain good records, including updating signal timing sheets and the central system database.

The retiming zone for this year includes all the signalized intersections north of Shea Boulevard and south of Pinnacle Peak Road. A significant number of intersections have never been reviewed, meaning that many are running in free mode with no coordination whatsoever. Completing the signal retiming necessitated revisiting and updating existing signal timing policies. Main parameters include 10 second minimum green time, 7 seconds for crossroad and 5 seconds for left turn and 15 seconds for bikes, depending on the presence of bike detection equipment.

Another important consideration is clearance time, which includes yellow, red and pedestrian flash/don't walk. Cycle length is a critical factor in maintaining coordination. For a.m. and p.m. plans, it was determined that 120 seconds is a suitable cycle length. For the off-plan the cycle can be reduced to 108 seconds. The night plan has a duration of 90 seconds. There is consideration for using half-cycle times at intersections with low volumes. Scottsdale has been primarily utilizing lagging left turn operations since 1989. At intersections with permitted/protected lagging left phasing, left turn arrows must start and terminate simultaneously to avoid trapping motorists. Splitting the opposing left turns with leading operation provides the flexibility to time the left turn phase based on the actual traffic demands. Best left-turn phases will be selected based on the following guidelines:

- Use consistent phase sequencing during different times of the day whenever possible.
- Lag/lag left turn sequences are recommended where it is currently being operated without issues, for intersections with heavy pedestrian volumes and for diamond interchanges.

- Lead/lead left turn sequences are recommended for intersections with protected left turns in only one direction, significantly different opposing left turn volumes, or when needed to improve progression.
- Lead/lag is only used at protected-only locations when it is the best sequencing for progression.
- Split phase is used only when there are opposing left turn conflicts.

Examples of timing conditions at some Scottsdale intersections were reviewed. The signal retiming process includes many steps beyond simply collecting data. Each intersection had to be studied and analyzed to determine its specific needs. The signal retiming process is not yet complete, although the modeling is complete. Next steps include implementation in the field, including travel time runs and before and after comparisons. A new Automated Traffic Signal Performance Measure (ATSPM) system is being deployed and will be tested to provide continuous real-time performance metrics. ATSPM consists of techniques for analysis of real time traffic data collected by field sensors and traffic signal controllers. ATSPM can provide real-time and historical vehicle delay, volume, speed, and travel time, allowing staff to evaluate signal performance on a regular basis and proactively manage the maintenance of signal assets instead of relying on citizen complaints.

Before the ATSPM system is fully implemented and more roadway sensors installed, the current signal retiming process and methodologies will still be used. The next retiming zone will focus on the Downtown area. Data collection is expected to start in April of 2020. The challenges of full implementation of ATSPM technology is the current lack of continuous data feed from the field. The existing loop detection system does not provide real time data collection or detection on main streets.

The Department is looking for a federal grant to upgrade to new detection technologies that enable data collection capability and provide real-time signal performance measures. Ms. Huo recently submitted a congestion management and air quality federal grant application to upgrade the City's ITS infrastructure. Because a three-year grant is available, she split the project into three phases. The request is for $2.5 million in federal grant funding. The local match requirement is only 5.7 percent. The first phase will address the corridor along Loop 101 and the project will be conducted in partnership with ADOT.

The second ITS infrastructure project submitted is for Scottsdale Road, addressing intersections that still do not operate via video detection. The plan is to upgrade the 40-signal detection system. They will determine which is the best detection system for this corridor. Options include video, thermal or radar. The project also includes upgrades to the 35 signal cabinets. The corridor is ranked in the top 100 regional corridors in terms of priority, accident rate and traffic demand. The total project cost is $1.4 million, with $1.37 million of this being requested via federal grant.

The third ITS infrastructure upgrade is fiber connections. Hayden Road is intended to serve as the backbone for the City's fiber network. At this time, the fiber network infrastructure is being shared with the IT Department and Water Department. There is no fiber on Hayden between Shea and McKellips. The project will fill this gap. The City is requesting approximately $1.7 million for construction and the City will cover the cost of design.

Commissioner commented that two years ago, John Kissinger from Kimley-Horn presented on the signal reprogramming project that they had done. He asked whether the current reprogramming

is implementing the project by Kimley-Horn. Ms. Huo opined that all of the Kimley-Horn work product has already been implemented in the field. The new effort focuses in northern areas that have not been addressed by Kimley-Horn.

Commissioner referenced lead/lag intersections and asked for clarification that the lead direction has lesser traffic versus the lag direction. Ms. Huo said that is not always the case. The main purpose for changing lead/lag is to help progression.

Commissioner asked whether safety statistics are also factored in when determining the lead and lag. Ms. Huo confirmed that those statistics are utilized.

Commissioner asked about the impacts and reactions from drivers to different configurations at different intersections. Ms. Huo stated that she is not in favor of changing phasing sequencing, especially during the time of day plan. Drivers have generally grown accustomed to the lag-lag system and the policy will likely not be changed unless City officials mandate a change. If there are unique factors for specific intersections, other models will be considered. Phillip Kercher, Traffic Engineering and Operations Manager, further explained that there will not be lagging arrows at all locations. A recent practice at some lead-lag locations was to have the intersection be leading in one direction in the morning and then perhaps leading in the other direction at noon and flipping during the day. The goal is to keep the model consistent, so that it will always be leading in one direction and lagging in another direction, as opposed to flipping throughout the day.

In response to a commissioner question, Ms. Huo stated that there is no intent for the model to change back and forth from weekday to weekend. The goal is to keep consistent sequencing at the same location. However, alternative sequencing may be used at other locations, depending on needs.

Commissioner referenced the nighttime cycle length of 90 seconds and asked whether nighttime hours are fixed throughout the year. Ms. Huo stated that the nighttime hours begin at 10 p.m. and end at 6 a.m.

Commissioner noted that in the presentation, Ms. Huo stated that the existing loop detection system does not provide real time data collection or detection on main streets. He asked what is planned going forward. Ms. Huo stated that the loop detection system was only installed on crossroads and side streets and left turn movements. The original plan was to run the intersection in coordination mode. The coordinated direction will receive the fixed time, meaning that there is less importance to have detection on the main street. The detection system they are looking to have includes stop bar direction in all directions, dilemma zone protection, bike lane detection and turning movement countdown. Some systems have a built-in Wi-Fi system, which allows for the capture of travel time data.

In response to a commissioner question, Ms. Huo confirmed that the system is video detection based. It is not consistently reliable and she feels there are quality issues involved. The Department would like to evaluate other detection systems, such as a thermal detection system, which is based on the temperature of the vehicle and will distinguish the vehicle from the pavement or a person from their environment. Thermal detection does not have the glare issues that are commonly experienced with video detection systems. In response to a commissioner question, Ms. Huo confirmed that these decisions have not yet been made.

Commissioner asked whether thermal detection would be able to detect electric vehicles, as they do not have the heat of combustible engines. Ms. Huo stated that thermal detection systems have been tested for electric vehicles. They are multiple point detection systems, which do not focus solely on the engine itself. One positive aspect of a video detection system is the ability see exactly what is happening on the road.

Commissioner referenced the intersection of Thompson Peak and Pima. Approaching Pima on Thompson Peak, the light may turn red and then an instant later, the green arrow will appear to go north. Commissioner asked for the reasoning of a one-second delay between the ongoing red and the right turn lagging green arrow. Ms. Huo stated that she would like to change that feature. There are two ways to configure a right turn overlap, including hardware (only receiving right turn green arrow when going north). The right turn is hardwired with the left turn. Then when the left turn goes to clearance, the right turn also goes to clearance. She attempted to implement a change through software coding with the other phase. This represents a big change to the practices of the technicians. She not yet tried the software coding at this particular location, however the change has been made at another location already. Testing to ensure the effectiveness of the software coding overlap is ongoing. The industry standard has traditionally been through hardware means. If the software coding overlap is successful, it will be used at other locations.

Vice Chair noted a difference in timing while traveling Scottsdale's arterial network. Traveling on Frank Lloyd Wright from Shea Boulevard, the trip gets better and better, even through construction zones.

Vice Chair asked for the time frame on revisiting system-wide enhancements in terms of potential adjustments. Ms. Huo said that this is done on an annual basis for the regular program, however, checks can occur more often based on demand.

Mr. Kercher commented that the Kimley Horn work was very expensive, being performed by a consultant. The signal timing effort involved heavy data collection. The work discussed by Ms. Huo is being performed in-house without the City expending funds for a consultant.

Commissioner asked whether there has been consideration for a flashing yellow configuration for nighttime only. Mr. Kercher stated that it has been discussed, however the prospect makes traffic engineers nervous. Volumes in Scottsdale typically do not drop off completely, even in the early morning hours. One of the goals, as discussed by Ms. Huo for areas of lower volume, is to have a fully actuated system. A change such as the flashing yellow configuration would have to be discussed and approved by City Council.

Chair asked Ms. Huo to return for another update in a few months.

6. MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) MEMBERSHIP

Dave Meinhart, Senior Transportation Planner, stated that MAG was formed in 1967 in response to federal policies requiring more local planning and review. The region had had a very successful regional planning effort associated with the 91st Avenue Wastewater Treatment Plant. In 1973, significant changes began to happen regarding how transportation would be managed and planned on a regional basis with the Federal Highway Act, which required metropolitan areas to have a regional transportation planning agency in order to qualify for federal funds. In 1989, the Arizona governor designated MAG as the region's lead air quality

planning organization. The City of Scottsdale participates on a committee coordinated by MAG at the request of member agencies for developing specifications and details for Public Works construction. MAG has a number of other roles which are not directly transportation-related, including water quality, solid waste, population projects and human services areas. MAG does not design, build or own public infrastructure that is regionally planned. This is done through member agencies, ADOT or Valley Metro.

For FY 20, MAG's projected operating budget was nearly $39 million, with roughly 94 percent coming from federal and state revenues and member dues. Dues are based on population for each community. Scottsdale's dues for FY 19/20 were $48,000. For this year and next year, Scottsdale will contribute another $40,000 per year for the special efforts with the 2020 census. In order to use federal transportation funds, there are requirements for both regional coordination and planning as well as air quality conformity. Surface Transportation Block Grant Funds consist of monies collected and used for the Arterial Life Cycle Program (ALCP). Approximately $60 million of block grant funds are programed for roadway improvements in Scottsdale. This includes the underpass on Miller Road, which will be tied in, in the future, to the vicinity of Loop 101 and Miller Road between Scottsdale and Hayden. Federal funding has also helped pay for freeway improvements in Scottsdale and on its borders. The City competes for various federal grants which are allocated to the MAG region. In the current Transportation Improvement Program (TIP) from FY 18-22, approximately $11.6 million in competitive grants have been programed for Scottsdale. Scottsdale is in the process of applying for significant additional grant funds.

At the regional level, a 0.5 cent sales tax is collected throughout the County, which has been in effect since 1986. The first 20 years of the program were as part of Prop 300 and focus on freeway construction. Projects funded through combination of Prop 300 and 400 sales tax collections included the 101 and 202 loop systems and State Route 51. Highway user revenue funds also come into the funding system. Over the life of the program, the ALCP has collected approximately $248 million. Prop 400 has continued to increase its contribution to fixed route bus service, totaling $8.1 million for this fiscal year. This pays for operations for regional grid routes. This year, the City will also receive $1.5 million towards its paratransit programs as well as reimbursements for Cab Connection.

State statute directs MAG to do the following:

- Plan freeway corridors, including the rebalancing of costs and revenues.
- Adopt freeway prioritization criteria.
- Approve freeway priorities.
- Approve material cost increases.
- Issue an annual report on the status of the implementation of Proposition 400.
- Establish a Transportation Policy Committee.
- Perform life cycle management of the arterial streets program.
- Approve major plan amendments.
- Prepare the public transportation element of the Regional Transportation Plan.
- Approve changes to the Transit Life Cycle Program that materially impact the performance of the Regional Transportation Plan.

The City works with MAG on travel demand forecasts, which includes research to determine transportation trends, behaviors and priorities. The Region has also been activity involved in transportation safety and efficiency activities for a long time, including the formation of MAG's

first committee, the Transportation Safety Committee, nearly ten years ago. This led to the establishment of the Road Safety Assessment Program in 2012. The Region performs intersection crash risk analysis as well as crossing guard training. MAG has become increasingly involved in transportation performance measures, including the creation of dashboards to help track trends, such as travel time index, average speed, average delay and congestion.

Transportation-related functions by MAG include:

- Freeway planning
- Travel demand modeling
- Regional Transportation Plan development and updates
- Prop 400 annual report
- TIP development and updates with air quality conformity

Scottsdale functions include:

- Determine street classifications
- Prioritize local transportation infrastructure needs
- Design, construct and own transportation infrastructure
- Plan and implement trolley routes
- Review development plans and make stipulations

Functions with overlap:

- Fixed route transit service planning
- Traffic count data collection
- Traffic collision data collection and traffic safety planning

Commissioner asked about the increase in dues over the past five years. Mr. Meinhart stated that dues totaled approximately $41,000 in 2016 and is $48,000 in 2020. Chair clarified that this does not cover amounts paid by residents and sales taxes in Scottsdale. Mr. Meinhart added that the region collects approximately $55 million per year currently from Scottsdale. Approximately 70 percent of collections from Scottsdale to MAG actually come back to fund Scottsdale projects. However, it is important to note that as a strong employment community, a strong transportation network regionally is important in order for workers to get to their jobs in Scottsdale.

Commissioner asked whether Scottsdale receives any funding from MAG's transit life cycle program. Mr. Meinhart that in the current fiscal year, the City is receiving approximately $8.1 million towards fixed route bus service and $1.5 million towards paratransit service.

Commissioner asked whether the City would be capable of its own ALCP planning. Mr. Meinhart stated that freeway planning is something that the City cannot do on its own. The City could do roadway planning on its own. However, if Scottsdale was not a member of MAG, it would not be eligible to utilize collected regional sales tax. The City would have to change its sales tax rate. From a federal perspective, it would become much more challenging if the City were not a member, since it is mandated that federal funds be distributed through MAG. In terms of grants, MAG is responsible for reviewing requests that come from other agencies through the committee process. The grant requests are written by the communities. MAG's primary role is ensuring a fair and balanced review.

Chair asked whether there is broad support within the Transportation Department for membership in MAG. Mr. Meinhart said that speaking for himself, just in looking at the presentation he had just given, he would say yes, he is supportive of the membership.

Chair asked whether Mr. Meinhart had any critiques. Mr. Meinhart stated that a major challenge is whether or not the City can come up with the matching funds to claim its portion of funding that will keep projects moving forward.

Commissioner commented that transportation is just one portion of what MAG does regionally. The City benefits from its participation with MAG in other ways and through other services. Mr. Meinhart said that from a financial perspective, transportation is the major portion. However, there are overlapping aspects, such as air quality, regional water quality and solid waste planning. They have a significant role in human services, such as homelessness and low income issues. Commissioner said that Scottsdale cannot scalpel itself out of MAG, as the agency provides benefits well beyond transportation. Scottsdale pays a large amount in transportation, however it receives back overflow in other areas.

In response to a question from Chair, Mr. Meinhart stated his understanding that Scottsdale is not forced to remain a member of MAG, as it is a member-created agency. In 1967, the members chose to become members. If Scottsdale wishes to be consistent with federal regulations tied to transportation from the federal level, it would be difficult to expect those funds to come to Scottsdale without its MAG membership.

Vice Chair posed a scenario where Scottsdale pulls of out MAG and asked whether Scottsdale's citizens would still be responsible for the sales tax. Mr. Meinhart surmised that they would still be responsible, because an election for extension is a countywide election.

Vice Chair asked about the potential that utilizing federal funds is more expensive, as there are more hoops to jump through. Mr. Meinhart acknowledged that there is a higher cost, primarily tied to an additional level of requirement for environmental review. The costs of the studies themselves are not inordinately expensive. Federal requirements also include mandatory noise studies.

Commissioner asked if the 0.5 percent sales tax collected for MAG is strictly used for transportation-related issues, or whether it also funds air quality and other issues. Mr. Meinhart stated that is mandated to only be used for transportation. The use of the sale tax revenues is also firewalled, based on the Regional Transportation Plan approved before the vote was held.

Commissioner inquired about why MAG charges dues. Mr. Meinhart acknowledged that he did not have a direct answer to the question.

Commissioner commented that there seems to be a lot of misunderstanding about MAG's role. He suggested the possibility of having someone from MAG appear at an upcoming meeting. Chair concurred with the suggestion.

7. OTHER TRANSPORTATION PROJECTS AND PROGRAM STATUS

Mr. Kercher stated that Scottsdale was mentioned in the current issue of the Institute of Traffic Engineering Journal for the Mustang Library Roundabout Combination Transit Center.

Scottsdale has been designated as a gold level Bike Friendly Community. Scottsdale is one of only 39 communities that have achieved the gold rating. The designation is valid for the next four years.

The City submitted to MAG for a grant for construction of a pedestrian hybrid beacon and word was recently received that they were selected to receive the grant totaling $185,000 for installation of the beacon at Scottsdale Road and Palm Lane. The plan is to begin construction in February, 2020.

A Scottsdale Senior Traffic Engineering Technician, Tony Plata, was selected as the outstanding multi-modal commuter by MAG and Valley Metro and MCDOT presentation, which took place a few weeks ago. Mr. Plata commutes 20 miles each way, from 63rd Avenue and Bethany Home via a combination of biking and transit.

Bus Route 81 was moved to McDonald Drive from Indian Bend between Hayden and Pima. This was done to eliminate redundancy on Hayden and add service to McDonald.

The 68th and Camelback Trolley route was moved from Jackrabbit to Montebello, due to congestion issues around Mohave Middle School.

The Mustang Trolley now pulls into Via Linda Senior Center from both directions, providing improved access for seniors to the facility.

Upcoming transportation items coming before City Council include:

- December 4th
  - Safe Routes to School grant, which will fund a Safe Routes to School coordinator. Interviews began this month.
  - Request for RTW Trolley provider to use space at the South Corp yard for storing vehicles.
- January 14th
  - Award of grant for Thomas Road streetscape project and 68th Street project.
  - These are MAG grants.

Commissioner asked about the characteristics desired in a Safe Routes to School coordinator. Mr. Kercher said they are looking for someone who understands the safety concerns related to students biking and walking to school and being able to communicate and coordinate with school districts. The candidate would be outgoing and willing to go to schools and interact with students and administration.

Mr. Kercher noted the construction on 90th Street between Via Linda and the 101. This was due to project developing on the Salt River-Pima Indian Community. Construction is complete and restrictions have been removed for 90th Street travel.

Hayden & Thomas has been under construction for some time. This is a safety improvement project anticipated to be complete by December.

On Scottsdale Road, two southbound lanes between McDonald and Chaparral have been closed due to replacement of a water main. This is actually a Paradise Valley project, but has impacted Scottsdale Road traffic. Construction should be complete by Thanksgiving.

Loop 101 is still under construction, but has been scaled back recently. There will be closures associated with the bridge widening at Scottsdale and Hayden upcoming.

There is a major project near Hayden and the 101 on the north side. They will be adding an additional lane on Hayden north of the 101 for about a half mile. During the construction, there will be impacts to Hayden Road, the frontage road and potentially the freeway. This will be going on until late 2020 to 2021.

Commissioner referred back to the Commission meeting of September, 2018, when he had discussed his personal experience riding the Oldtown Trolley. He had suggested that the drivers be more tourist-friendly. At that time, Lisa Johnson had indicated that the City was currently working with the Region to install a new computer-aided dispatch and automated system vehicle locator system (AVL). He requested an update, if available. Mr. Kercher stated his recollection that has been discussed, however an update will be included with the request for future items.

Vice Chair asked about the status of the bridge at Drinkwater and the 68th Street bridge. Mr. Kercher stated that both are open. The City expects some return of funding on Drinkwater, as the cost was less than anticipated.

Vice Chair asked about progress on the rebid and finalization of the equestrian underpass at 124th Street and Shea. Mr. Kercher stated that he believes a contractor has been selected. He would be happy to provide an update at the next meeting.

Chair requested a status of other major projects in Downtown prior to the end of tourism season.

Commissioner stated that the Commission was previously informed that traffic and collision data books would be available this month. Mr. Kercher said that staff had intended to distribute those this evening. They were sent to the printer, however, there was a slight delay. They should be expected on Monday. A link to an electronic copy will be provided.

8. PUBLIC COMMENT

There were no public comments.

9. COMMISSION IDENTIFICATION OF FUTURE AGENDA ITEMS

Commissioner requested an invitation to MAG to send a representative to provide an overview of the organization. It would be helpful to have a total picture of their role, including transportation and non-transportation projects.

Commissioner requested an update on recruitment of a director.

Commissioner asked if and how the Commission will be involved in the Smart City Roadmap. Mr. Kercher said that he could ask Brent Stockwell to give a presentation.

10. ANNOUNCEMENTS

There were no announcements.

11. ADJOURNMENT

With no further business to discuss, being duly moved by Commissioner Kuzel and seconded by Commissioner Anderson, the meeting adjourned at 7:53 p.m.

AYES: Chair Graham, Vice Chair Iacovo, Commissioners Anderson, Ertel, Kuzel, Lall and Miller.
NAYS: None

SUBMITTED BY:

eScribers, LLC

***Note: These are summary action meeting minutes only. A complete copy of the audio/video recording is available at http://www.scottsdaleaz.gov/boards/transp.asp**